

### Abstract

The present invention concerns a poxviral particle having a targeted infection  
5 specificity conferred by an heterologous ligand moiety present at the surface of said  
poxviral particle and capable of specifically recognizing and binding to an anti-ligand  
molecule localized at the surface of target cells. The present invention further relates to  
a vector comprising a nucleotide sequence encoding a chimeric polypeptide including  
such an heterologous ligand moiety and all or part of a natural poxviral surface  
10 polypeptide. The present invention additionally concerns compositions comprising said  
poxviral particle or said vector as well as their use for therapeutic and prophylactic  
purposes. The invention is of very special interest in gene therapy applications, in  
particular in preventing or treating cancer in mammals.